

## **AMENDMENTS TO THE CLAIMS**

This listing of claims replaces all prior versions and listings in this application.

### **Listing of Claims:**

**Claim 1** (Original): A system for evaluating or calibrating a bubble detector, comprising:

- a conduit adapted to pass a flow material therethrough;
- a pump operatively coupled to the conduit to pump the flow material through the conduit;
- a bubble-forming device operatively coupled to the conduit, the bubble-forming device being adapted to introduce bubbles into the flow material passing through the conduit; and
- a bubble detector to be evaluated positioned to examine the bubbles in the flow material passing through the conduit.

**Claim 2** (Original): The system, as set forth in claim 1, comprising:

- an elevation device positioned to examine the bubbles in the flow material passing through the conduit.

**Claim 3** (Original): The system, as set forth in claim 1, wherein the pump comprises a peristaltic pump.

**Claim 4** (Original): The system, as set forth in claim 1, wherein the pump is capable of pumping the flow material through the conduit at a plurality of flow rates.

**Claim 5** (Original): The system, as set forth in claim 1, wherein the bubble-forming device comprises:

- a connecting device operatively coupled to the conduit;
- a bubble-forming capillary adapted to be positioned within the connecting device in communication with the flow material passing through the conduit; and
- a bubble-pumping device operatively coupled to the bubble-forming capillary, the bubble-pumping device adapted to deliver a bubble-forming material to the flow material in the conduit through the bubble-forming capillary to create bubbles in the flow material.

**Claim 6** (Original): The system, as set forth in claim 5, wherein the capillary comprises:

- a proximal portion operatively coupled to the bubble-pumping device and a distal portion slidably positioned within the connecting device.

**Claim 7** (Original): The system, as set forth in claim 5, wherein the bubble-pumping device comprises a syringe.

**Claim 8** (Original): The system, as set forth in claim 5, wherein the bubble-pumping device is adapted to deliver the bubble-forming material at a plurality of bubble flow rates and sizes.

**Claim 9** (Original): The system, as set forth in claim 1, comprising:

a pulse dampener operatively coupled to the lumen between the pump and the bubble-forming device.

**Claim 10** (Original): The system, as set forth in claim 1, wherein the flow material comprises a surfactant.

**Claim 11** (Original): The system, as set forth in claim 2, wherein the evaluation device comprises:

a previously evaluated bubble detector having a known bubble detection resolution.

**Claim 12** (Original): The system, as set forth in claim 2, wherein the evaluation device comprises:

an inspection device adapted to record bubbles formed by the bubble-forming device.

**Claim 13** (Original): The system, as set forth in claim 12, wherein the inspection device comprises a camera operatively positioned proximate the connecting device.

**Claim 14** (Original): A method of evaluating or calibrating a bubble detector comprising the acts of:

- (a) pumping a flow material through a conduit;
- (b) introducing bubbles into the flow material;
- (c) examining the bubbles in the flow material with a bubble detector under evaluation;

and

- (d) detecting the bubbles in the flow material.

**Claim 15** (Original): The method, as set forth in claim 14, wherein act (b) comprises the act of:  
using a capillary to inject bubbles into the flow material.

**Claim 16** (Original): The method, as set forth in claim 15, wherein the act of using a capillary comprises the act of:

slidably positioning the capillary within the flow material to adjust the size of the bubbles.

**Claim 17** (Original): The method, as set forth in claim 15, wherein the act of using a capillary comprises the act of:

pumping a bubble-forming material through the capillary and into the flow material.

**Claim 18** (Original): The method, as set forth in claim 14, wherein act (b) comprises the act of:  
introducing a gas into the flow material to create the bubbles.

**Claim 19** (Original): The method, as set forth in claim 14, comprising the act of:  
mitigating pressure oscillations within the flow material.

**Claim 20** (Original): The method, as set forth in claim 14, wherein act (c) comprises the act of:  
using an ultrasonic probe to examine the bubbles in the flow material at a plurality of ultrasonic signal levels.

**Claim 21** (Original): The method, as set forth in claim 14, wherein act (d) comprises the act of:  
detecting the bubbles by visual inspection.

**Claim 22** (Original): The method, as set forth in claim 14, wherein act (d) comprises the act of:  
detecting the bubbles using a bubble detector having a known bubble detection resolution.

**Claim 23** (Original): The method, as set forth in claim 14, comprising the act of:  
comparing the examination of the bubbles in the flow material with the bubble detector with the detection of the bubbles in the flow material to calibrate the bubble detector.

**Claim 24** (Original): The method of claim 23, comprising the acts of:

- (a) calculating a calibration factor from the examination of the bubbles in the flow material with the bubble detector and the detection of the bubbles in the flow material; and
- (b) applying the calibration factor to the bubble detector to calibrate the bubble detector.

**Claim 25** (Original): The method, as set forth in claim 14, wherein act (a) comprises the act of:  
pumping the flow material in the conduit at a plurality of flow rates.

**Claim 26** (Original): The method, as set forth in claim 14, wherein act (b) comprises the act of:  
altering the size of the bubbles.

**Claim 27** (Original): The method, as set forth in claim 14, wherein act (b) comprises the act of:  
altering a formation rate of the bubbles.

**Claim 28** (Original): The method, as set forth in claim 24, wherein act (b) comprises the act of:  
programming the calibration factor into a memory of the bubble detector.

**Claim 29-60** (Cancelled)